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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,391	03/27/2001	Kunihiro Yamamoto	B588-017	2786

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EXAMINER

NGUYEN, CINDY

ART UNIT PAPER NUMBER

2171

DATE MAILED: 04/23/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,391

Applicant(s)

YAMAMOTO ET AL.

Examiner

Cindy Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 7-11 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-11 and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s) _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

This is in response to communication filed 03/25/04.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/25/04 has been entered.

1. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-11, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipson et al. (U.S 6463426) (Lipson) in view of Murakawa (U.S 6249607).

Regarding claims 1, 9 and 17, Lipson discloses: An image retrieval apparatus for retrieving a desired image from a plurality of stored images, comprising:

storage (18, fig. 1 and corresponding text, Lipson) means for storing the plurality of images and image features of each of the plurality of images in a form correlated with the images (20, fig. 1 and corresponding text, Lipson), wherein the image features of each image include

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image features of tiles obtained by dividing an image into a predetermined number of tiles (col. 14, lines 29-49, Lipson);

feature calculation means for dividing a retrieval source image into the predetermined number of tiles and calculating image features for every tile (col. 11, lines 38 to 12, lines 20, Lipson);

retrieval means for performing image retrieval by calculating degree of similarity between each of the plurality of images and the retrieval source image based upon the plural sets of image features acquired by the acquisition means and the image features calculated by the feature calculation means (col. 15, lines 60 to col. 16, lines 58, Lipson), wherein said retrieval means calculates degree of similarity between each image that has been stored in said storage means and the retrieval-source image using the plural sets of image features acquired by said acquisition means (col. 15, lines 16 col. 16, lines 58, Lipson), and adopts maximum degree of similarity as the degree of similarity between a particular image and the retrieval-source image (col. 17, lines 54-67, Lipson).

However, Lipson didn't disclose: acquisition means for generating image features by multiplying each of the image features of the plurality of tiles that have been stored in said storage means, by a constant and acquiring plural sets of image features regarding one image by varying the constant. On the other hand, Murakawa discloses: acquisition means for generating image features by multiplying each of the image features of the plurality of tiles that have been stored in said storage means, by a constant and acquiring plural sets of image features regarding one image by varying the constant (col. 13, lines 20-54, Murakawa). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to

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include step for generating image features by multiplying each of the image features of the plurality of tiles that have been stored in said storage means, by a constant and acquiring plural sets of image features regarding one image by varying the constant in the system of Lipson as taught by Murakawa. The motivation being to enable the system provides the shape comparison can be set by setting weights for coefficients representing the feature quantities of the key image and the comparative images, making it possible to freely set whether the comparison is executed with importance placed on the outline of a shape or with importance placed on details of a shape (col. 13, lines 20-54, Murakawa).

Regarding claims 8, 16 and 18, all the limitations of these claims have been noted in the rejection of claim 1 above. It is therefore rejected as set forth above.

Regarding claims 2 and 10, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. In addition, Lipson/Murakawa discloses: wherein said acquisition means generates N sets of image features by multiplying a luminance component of the image features that have been stored in said storage means by N constants (col. 10, lines 43 to col. 11, lines 10, Kasson).

Regarding claims 3 and 11, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. In addition, Lipson/Murakawa discloses: wherein said acquisition means generates N sets of image features by multiplying a color difference component of the image features that have been stored in said storage means by N constants (col. 10, lines 13-35, Kasson).

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3. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lipson et al. (U.S 6463426) (Lipson) in view of Murakawa (U.S 6249607) and further in view of Shiiyama (U.S 6411291).

Regarding claims 7 and 15, most of the limitations of these claims have been noted in the rejection of claims 1 and 9 above, respectively. However, Lipson/Murakawa didn't disclose: wherein said acquisition means has specifying means for allowing an operator to specify number of steps over which image features are varied as well as the amount of change provided by each step. On the other hand, Shiiyama discloses: wherein said acquisition means has specifying means for allowing an operator to specify number of steps over which image features are varied as well as the amount of change provided by each step (col. 5, lines 37 to col. 6, lines 67, Murakawa). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include an operator to specify number of steps over with image features are varied and change in each step in the combination system of Lipson/Murakawa as taught by Shiiyama. The motivation being to enable the user to process for reducing the amount of computation for retrieving the degree of similarity of image in the system.

4. *Response to Arguments*

Applicant's arguments have been considered, but are moot in view of the new ground(s) of rejection.

5. *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Normile et al. (U.S 5872864). Method and system for automatic classification of video images.

Foote et al. (U.S 6404925). Methods and apparatuses for segmenting an audio visual recording using image similarity searching and audio speaker recognition.

Abbel-Mottaleb et al. (U.S 6263113). Method for detecting a face in a digital image.

Abbel-Mottaleb et al. (U.S 5915038). Using index keys extracted from JPEG-compressed images from image retrieval.

Shiiyama (U.S 6400853). Image retrieval apparatus and method.

6. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

CN

Cindy Nguyen
April 15, 2004


WAYNE AMSBURY
PRIMARY PATENT EXAMINER